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## MUSIC HATH CHARMS.

ONE of the American humorists lays it down as a fundamental law concerning human nature, that we are each of us at some period of our lives subject to an intense desire to play a musical instrument. Upon this text he bases an amusing history of how he himself had once been bitten in that way, and had had in consequence often to shift his quarters, flying from unsympathising landladies and others whose savage breasts utterly refused to be charmed by his well-meant efforts to gain musical proficiency. Jestings apart—there is a substratum of truth in the 'fundamental law' referred to; and most of our readers will acknowledge that they have at some time of their lives really experienced a desire of the kind. It is doubtful whether our very first toys are not most prized if they be capable of making some kind of sound. The eagerness with which a baby will shake a rattle, or later on will blow away at a tin trumpet or knock a drum to pieces, is evidence that even at a very early age noise is far from being distasteful to us.

Watch an errand-boy in any of our crowded thoroughfares. Can he be quiet? Not a bit of it. Noisy he must be, or nothing. Whistling a popular melody with that earnestness of purpose peculiar to him, or with forefingers stretching wide his mouth, emitting a shriek only excelled by a railway engine, he goes on his way rejoicing. Perhaps he accompanies his performance by dragging a stick along the palings which he happens to be passing, making them ring again. But in some way or other he will have noise, for he delights in it as part of his very nature. As he grows older, he is sure sooner or later to fulfil his destiny and procure some kind of musical instrument. A penny whistle is generally his first investment, and the National Anthem his first tune. Later on, when the period of hobby-dehoyhood grows upon him, he affects that dreadful instrument of torture, a cheap concertina. With this, and one or two boon companions similarly armed, he parades the streets when

work is over, and enjoys himself in his own way.

If we examine the contents of a modern toy-shop, we shall find that nearly fifty per cent. of the stock is intended for the production of noise. First we may notice the corals, which no well-conducted baby would condescend to notice unless they were decorated with noisy little bells. Then we have several types of rattle. There is the rattle proper, made of basket-work, and containing some mysterious articles which tinkle whenever it is moved. Then there is the improved rattle, a kind of small drum fixed on a handle, and occasionally crowned with a cap and bells. Next we have drums of all sizes, made of real parchment, and capable of any amount of acoustic display. (By the way, we have remarked that toy drum skins are often covered with legal matter, reminiscences of forgotten lawsuits. It is a question therefore whether some of them were not very noisy subjects before being brought to the drum-head.) Trumpets galore—only capable of producing one solitary note; but that one note is of such distressing nasal qualities that it is more than sufficient to make good all deficiencies. Then comes the harmonicon tribe—plates of brass, glass, or even hard wood placed in a frame and tinkled into melody by little wooden mallets.

Our list is not half complete, for we have not yet touched upon the delicate subject of whistles. We have noticed in this connection with some sadness, that not content with the whistle *per se*, a degenerate custom has lately obtained of attaching surreptitious whistles to other toys. The baby's coral has often this exasperating addition. Riding-whips and pop-guns are also to be regarded with suspicion for the same reason. There is also a numerous class of vulcanised india-rubber dolls and animals which are squeezed into expressing their feelings through a small metallic whistle which forms part of their internal economy.

Another wide field for the invention of noisy toys is comprised in the wire-stringed class. These are generally in the form of carts or wagons, and the peculiarly aggravating feature of their con-

struction is not guessed at until the wheels revolve. This operation is accompanied by a most irritating tum-tumming on three or four wires, which are plucked by bristles on the axle of the wheels. Sometimes the same apparatus is inclosed in a box and is set in motion by means of a handle, with the same pleasurable result as that achieved by one of the old-fashioned London street organs with a monkey. (We mention the animal element with intention; for it is a fact that organs carrying monkeys are invariably more out of tune than those without such appendages. Why this should be the case, we cannot guess, unless it be that the itinerant musician is afraid of spoiling the public by giving too many good things at once.) It would be impossible in the space at our command to enumerate all the toys of a noisy character; but we have said enough to shew that there is an endless supply of them, and it is therefore fair to assume that the demand keeps pace with it.

Now it is a curious fact that the acoustic principles on which the construction of most of these toys is based, were known and utilised by savage nations all the world over for many centuries before intercourse with Europe became possible. Indeed some of their musical instruments—in use at the present day—are of unknown antiquity. Thus the North American Indians make rattles of dried gourds filled with pebbles, an instrument capable of making a formidable noise. Baked clay vessels are also turned to the same purpose. Gourds are used in another way by the Hindus, who attach them to a species of stringed instrument to increase its resonance, in the same way that we employ sound-boards in the present day. Pandean pipes made of reeds seem to be the common property of every nation under the sun; indeed all kinds of pipes and flutes are common to all countries, and in many cases the term flute is applied to all wind-instruments indiscriminately. Savage nations make their flutes either of pottery or bone, the tibia or perhaps the thigh-bone of a fallen foe often furnishing his enemies with music for many years after his decease. And this is not the only case of human remains being turned to musical account, for travellers tell us that drums are often stretched with human skin. Thus savages are not content with belabouring their foes during life, but continue the castigation after they have ceased to exist.

Instruments of percussion, whether adorned with human skin or not, seem to be very favourite things with primitive man. This is no doubt owing to the ease with which such instruments could be made and used. The same reasoning applies to instruments of the harmonicon class, which have been constructed of every conceivable substance from which can be extracted an atom of resonance. Stringed instruments are also found in different forms in all quarters of the globe. The most primitive form is a rough board with a few strings stretched across it. This is the parent of

the dulcimer, which in its turn is undoubtedly the prototype of most of our modern stringed instruments. The older method of procedure was to pluck the strings of all such instruments with a small pointed piece of bone or stick, the violin bow being of later date altogether.

It is a remarkable fact, and one which gives colour to the assumption that the love of music is natural and not acquired, that the various instruments used by savage tribes in widely separated countries are almost identical in character. This shews that the same ideas have arisen and have been acted upon by people who can have had no kind of communication. More than this; where the art has so far advanced as to give a definite structure to instruments, making them capable of affording a regular scale of notes, the particular arrangement adopted is the same in different countries. For instance, in Mexico and Peru we find an instrument which produces a scale of five notes (the Pentatonic scale), sometimes called the Scotch scale, because the arrangement is a characteristic feature of many of our northern melodies. In an opposite quarter of the globe altogether—namely in China, we also find a clay instrument having five finger-holes and giving the same scale.

These facts prove that musical ideas are not the result of civilisation, but are naturally acquired. The same delight with which a child shakes its rattle urges the savage to act in the same manner. It may be imagined that the first step in the process of musical education was prompted by the wish to imitate the calls of birds, either for the mere sake of imitation or as a help to snaring them for the purposes of food. The voice would naturally be the agent employed, until some accident, such as the whistling of the wind through the reeds, or past some favourably placed hole in the rocks, would suggest that art might be capable of producing sounds of louder quality.

It is probable that every nation under the sun has contributed in some degree to the various instruments used in our modern orchestras. We have arrived at a pitch of perfection in their manufacture which renders any great improvement in them simply impossible. Not only has the skill of the best workmen been devoted to them, but the aid of science has also been enlisted in their service. We now know the conditions under which sounds are made manifest to our senses. We can analyse them, and by suitable materials and mode of workmanship, can give them a certain quality or *timbre*, a judicious blending of which constitutes the charm of a complete orchestra. There is no more interesting field of inquiry than this question of the *timbre* of musical sounds. We have no English word to express this quality, and therefore we use a French one; but the great German physicist Helmholtz makes use of a far more expressive term for the same thing—that is, *Klangfarbe*, the English equivalent for which would be clang-tint. He tells us that the peculiar

clang-tint of every instrument by which we can identify it is due simply to the number of harmonics or over-tones which fill the air when any one note is sounded. It is difficult for even a practised ear to detect these superposed sounds; but by suitable apparatus their presence in all instruments is rendered audible. In the piano and violin these over-tones follow one another in a regular series. For instance, we will suppose that a certain note on the violin gives five hundred vibrations in a second of time. The over-tones to that note will give respectively twice, three times, four times, &c. five hundred vibrations; and such a series will form the octave, the fifth, the super-octave, the third, &c. of the note sounded. But in the clarinet and other instruments, the harmonics follow a different order, and therefore the *timbre* of the sounds produced is entirely changed. A curious fact in connection with this subject is that Helmholtz's beautiful theory was long ago anticipated in practice by the builders of church organs. In all old organs we find what are called *mixture stops*. In these stops, instead of one pipe to each note, there are three or four; so that when a single key is depressed, a full chord is sounded. Now these pipes are tuned to the harmonics or over-tones of the notes to which they are attached, and therefore add a richness of clang-tint to the full organ.

## YOUNG LORD PENRITH.

## CHAPTER XXIX.—ON THE LEDGE.

THERE was one lofty cliff, known in local parlance as the Spanish Beacon, that overlooked Treport, and from the peak of which many a fire had probably gleamed forth through the blackness of the night to give warning that some floating castle, with high poop and gilded stern-gallery, and grinning cannon ranged in tiers, and the red and yellow standard of Castile at her masthead, was perilously near the ill-defended coast. In later and more prosaic days the Beacon had been a favourite patrolling place for Custom-house officers and coast-guardsmen, commanding, as it did, a view of more than one creek and cove, and especially of St Mary's Bay, which was screened by high crags from nearly every stand-point but this. To the Spanish Beacon, on the day succeeding that which had witnessed the last fruitless visit to Giles Treloar's lodging-house in Holloway, as well as the enforced self-expatriation of Jan Pennant the fisherman, Hugh Ashton, telescope in hand, made his solitary way.

It was a call of duty, in this case, which caused the young sailor to breast the steep hillside that overhung Treport. A merchant brig, heavily laden, was reported to have got aground in St Mary's Bay; and, although in no present danger, thanks to the fineness of the weather, might require assistance to get her fairly afloat again. Thanks to Hugh's own zealous efforts, the steamer was nearly ready for sea, and there was every chance that on the morrow the *Western Maid* should once more glide out of harbour to render aid to the embayed vessel.

Hugh's spirits rose at the prospect of a more stirring life than he had led of late, and it was with an elastic tread and a quick step that he

climbed the steep road, Neptune bounding cheerily by his side. The great Newfoundland had taken a remarkable fancy to the young stranger—Hugh Ashton was indeed one of those whom dogs and children love—and was fond of accompanying him when he went abroad.

Once on the highest point of the cliff—where a flagstaff, erected by command of H.M.'s Board of Revenue, occupied the spot where once, by sanction of the Queen's Highness, furze and fagots were stacked around the stout tar-barrel that was to apprise Elizabeth's liege subjects of the two religions that tyrant Spain, rich with the gold of Mexico and the silver of Peru, and drawing recruits for her ships and regiments from three European countries beneath the sceptre of the gloomy bigot of the Escorial, threatened their shores with his costly navy—Hugh adjusted his glass, and with a practised eye, surveyed St Mary's Bay. There was work going on, evidently, on board the brig. Carts and horses were busy on the beach, and a black line of men, busy as ants, could be seen to form a living bridge between the ship and the shore.

'They are landing a part of their cargo,' said Hugh, shutting up his glass. 'They will be light, and the rising tide will float them off without help from steam. I don't think, unless the wind shifts and freshens,' he added, taking that deliberate, steady look at the horizon which only shepherds and sailors take, 'that the *Western Maid* will be wanted in St Mary's Bay.—What ails the dog? Why, Nep! Nep!'

Hugh Ashton had some reason for his surprise, since Neptune, ordinarily as staid and majestic an animal, once the first moments of frisky enjoyment at sallying forth were over, as Cornwall could supply, suddenly began to run up and down on the very verge of the cliff, precisely as you may see an intelligent sheep-dog pace up and down an invisible boundary-line beyond which his woolly charge are not to pass. Presently Neptune came up to Hugh whimpering, and thrust his cold nose into the young man's hand; then with a quick hoarse bark, he bounded towards the edge of the cliff, and finding that he was not followed, lifted his head, and howled eloquently. 'What d'ye want Nep, boy?' asked Hugh, walking slowly towards the precipice. Again the dog barked, reproachfully, as Hugh fancied, as dogs do bark when they find it hard to impart their meaning to their human friends. 'I wish Nep could speak,' said the young sailor, as he reached the dizzy edge of the cliff. 'Why,' he exclaimed, as he looked down, and his very heart seemed to stop beating at the sight he saw, 'the dog was right!'

What Hugh saw was, forty feet below, a man clinging, as lizards cling, to a slanting and slippery ledge of splintered rock, jutting from the dull crimson face of the storm-beaten cliff; while, many hundred feet below, gleamed the white line of surf upon the narrow beach studded with jagged rocks, and resounded, hollow and hungry, the low roar of the sea. Some two yards off, beyond the reach of mortal arm, grew in a cleft a withered furze-bush, and this afforded the only branch, or root, or trunk, for a considerable distance to left and right, to which a desperate hand might cling. As for scaling the cliff in front, beetling as it did, a fly might have done it; but neither goat nor

man, nor even the sure-footed hill-fox. And, below, roared and yawned the hungry sea.

Hugh had seasoned nerves, and a sailor's steadiness of brain; but he felt sick and giddy for a moment as he saw the dire peril of the unfortunate one beneath. How the poor creature, whoever he was, had reached the place where he now hung suspended in mid-air, was explained by the rope that dangled, tantalisingly out of reach, above his head. Instinctively, Hugh looked for the other end of the dangling cord. It was made fast to an iron peg firmly driven into the earth near the verge of the cliff, close by which two other coils of slender rope were nestling amidst the rank couch-grass. The dog barked again. Then the man below lifted his pale young face, and Hugh and he knew each other at once. 'Why, Will Farleigh!' exclaimed the former.

'Yes, Captain!' gasped out poor Will, clinging to the ledge. 'All my own fault; I don't deny it. But you see I've had Death for a playfellow so long, that I am like the pitcher that went to the well once too often. These granite cliffs have got crystals in them as sharp as a glazier's diamond. One of them has cut the rope, that rubbed across its edge, as clean as a knife would have done. I went down because the red-legged choughs make their nests still among the fissures, and a Cornish chough is worth two gold guineas any day, at a London bird-stuffer's. And the mother wants port-wine and comforts that— But I was a fool, wasn't I? Break it gently to her and to Rose, please!'

'Hold on, hold on!' cried Hugh encouragingly, as he hauled in the severed rope, and, with a sailor's dexterity, proceeded to splice it with one of the other coils of cordage. 'I'll lower away, and haul you up with the help of the coast-guard yonder. I see his glazed hat, and the gleam of the pistol in his belt, as he comes on his patrol along the path.'

'That's just what's impossible, Captain Ashton,' answered the bird-hunter despairingly. 'See how I've had to drive my fingers and feet into the earth, to hold on. As it is, they're getting main tired, and soon I'm thinking I shall have to give in, and let go. My hands are cramped and numbed, and I could not spare one to catch at the rope.'

'Then I'll try another plan,' returned Hugh; and, hastily making a running noose at the end of the cord, he lowered it over the cliff edge, and taking a firm hold of the rope, went boldly down, hand over hand, availing himself of every projection or angle of the crag on which his feet could rest.

'Ware! You'll go down two hundred yards into that murdering sea!' cried out Will Farleigh unselfishly, as he saw his rescuer swing himself over the giddy depths below. But in less time than it takes to write it, Hugh was kneeling among the gnarled roots of the withered furze-bush, and was leaning forward to pass the running noose around Will's body.

'Let it slip over, so as to take you beneath the armpits. It will never keep firm, else!' cried Hugh. It was a moment of deadly peril to both. There was a fatal fascination tempting the adventurers to look below, where the cruel rocks and the roaring sea awaited their victims, and where the giddy depths of air would have caused the soundest

brain to reel. With no slight risk and trouble the noose was at last slipped beneath the bird-hunter's arms. 'Now, go up, my lad!' said Hugh encouragingly. 'I shall do well enough until you let down the rope for me.'

'I can't do it, with these stiff hands, and joints racked with pain,' gasped out Will Farleigh, who was evidently much exhausted. 'God help me! Save yourself, Captain Hugh, and never mind me.'

'Keep your heart up, and hold on to stone and earth for a minute or two longer, to save a jerk on the line,' called out Hugh; and then, hailing the coast-guardsmen, who by this time was peering over the verge of the precipice, he begged him to make fast and lower away the third piece of cord. The man was quick in complying with his injunction. The rope was lowered; and once, twice, Hugh caught at it in vain; but, the third time it swayed near him, he succeeded in grasping it; and, with surprising boldness and agility, struggled upwards to the beetling brow of the cliff, where the coast-guard, kneeling and stooping over, caught him by the arm, and drew him safely over the edge.

Then came the work of hauling up Will Farleigh from his precarious post on the slippery ledge; a laborious task, since the bird-hunter, expert cragsman though he was, could do nothing in his spent condition to expedite the process; and when at last he stood on firm ground, and the tightened noose was withdrawn, he staggered from physical exhaustion, and was compelled to lean on Hugh's shoulder for support. 'If ever there comes the chance, Captain Ashton, that a man's life would need to be risked to do you a good turn, mine's ready and willing,' said the poor fellow, with moistened eyes, as, leaning on Hugh's strong arm, he walked slowly down the steep path that led to the town. 'But such a near shave as that almost sickens a chap of his trade!'

It was quite evident that Neptune, as with joyous bark and rough gambols he frisked his way down the hill, was perfectly well aware of his own share in the rescue. Once arrived at the cottage, Will told his tale, dwelling, characteristically, but little on his own sufferings, or the fearful suspense he had endured as he hung helpless in the presence of a terrible death, but painting in glowing colours Hugh Ashton's bravery and strength.

And Rose Trawl, coming suddenly forward, caught up Hugh's hand and pressed it to her lips. 'You have saved dear Will!' she said. 'You have been so good and patient with my grandfather! How shall I thank you enough, Captain Ashton, or how shall we all thank you as we ought to do? It seems but the other day that you came among us a stranger.'

Hugh laughed. 'Nep really does deserve some praise, Miss Rose,' said he, 'since but for him we should have known nothing. And Will Farleigh, in time of need, would have done as much for me.'

At this moment there was a knocking at the outer door; and 'Nezer, the dwarf factotum of the establishment, who went to answer it, returned, carrying a letter which one of the grooms from Llosthuel Court had just brought down.

'For you, skipper!' said the dwarf, handing the letter to Hugh.



'Lady Larpent wishes to see me instantly; she does not say why,' said the young man, as he finished the perusal of some half-dozen lines in the Dowager's bold black handwriting. 'I will go up to the Court at once.'

(To be continued.)

# RECOLLECTIONS OF THACKERAY.

IN the absence of any complete biography of the late William Makepeace Thackeray, every anecdote regarding him has a certain value, in so far as it throws a light on his personal character and methods of work. Read in this light and in this spirit, all the tributes to his memory are valuable and interesting. Glancing over some memoranda connected with the life of the novelist, contained in a book which has come under our notice, entitled *Anecdote Biographies*, we gain a ready insight into his character. And from the materials thus supplied, we now offer a few anecdotes treasured up in these too brief memorials of his life.

Thackeray was born at Calcutta in 1811. While still very young, he was sent to England; on the homeward voyage he had a peep at the great Napoleon in his exile-home at St Helena. He received his education at the Charterhouse School and at Cambridge, leaving the latter without a degree. His fortune at this time amounted to twenty thousand pounds; this he afterwards lost through unfortunate speculations, but not before he had travelled a good deal on the continent, and acquainted himself with French and German everyday life and literature. His first inclination was to follow the profession of an artist; and curious to relate, he made overtures to Charles Dickens to illustrate his earliest book. Thackeray was well equipped both in body and mind when his career as an author began; but over ten years of hard toil at newspaper and magazine writing were undergone before he became known as the author of *Vanity Fair*, and one of the first of living novelists. He lectured with fair if not with extraordinary success both in England and America, when the sunshine of public favour had been secured. His career of successful novel-writing terminated suddenly on 24th December 1863, and like Dickens, he had an unfinished novel on hand.

Thackeray's generosity to others in a struggling position is well known. The following are fair examples.

One morning Thackeray knocked at the door of Horace Mayhew's chambers in Regent Street, crying from without: 'It's no use, Horry Mayhew; open the door.' On entering, he said cheerfully: 'Well, young gentleman, you'll admit an old fog.' When leaving, with his hat in his hand, he remarked: 'By-the-by, how stupid! I was going away without doing part of the business of my visit. You spoke the other day of poor George. Somebody—most unaccountably—has returned me a five-pound note I lent him a long time ago.

I didn't expect it. So just hand to George; and tell him, when his pocket will bear it, to pass it on to some poor fellow of his acquaintance. By-bye.' He was gone! This was one of Thackeray's delicate methods of doing a favour; the recipient was asked to *pass it on*.

One of his last acts on leaving America after a lecturing tour, was to return twenty-five per cent. of the proceeds of one of his lectures to a young speculator who had been a loser by the bargain. While known to hand a gold piece to a waiter with the remark: 'My friend, will you do me the favour to accept a sovereign?' he has also been known to say to a visitor who had proffered a card: 'Don't leave this bit of paper; it has cost you two cents, and will be just as good for your next call.' Evidently aware that money when properly used is a wonderful health-restorer, he was found by a friend who had entered his bedroom in Paris, gravely placing some napoleons in a pill-box, on the lid of which was written: 'One to be taken occasionally.' When asked to explain, it came out that these strange pills were for an old person who said she was very ill, and in distress; and so he had concluded that this was the medicine wanted. 'Dr Thackeray,' he remarked, 'intends to leave it with her himself. Let us walk out together.' To a young literary man afterwards his amanuensis, he wrote thus, on hearing that a loss had befallen him: 'I am sincerely sorry to hear of your position, and send the little contribution which came so opportunely from another friend whom I was enabled once to help. When you are well-to-do again, I know you will pay it back; and I daresay somebody else will want the money, which is meanwhile most heartily at your service.'

Unlike Charles Dickens, he was never happy when he had the prospect of a speech to make or had to act as chairman at some public gathering. One morning his amanuensis found him in bed, and discovered that he had passed a restless night. He was to preside that evening at the dinner of the General Theatrical Fund. His assistant ventured to remark that he was sorry he did not seem well that morning. 'Well!' he exclaimed; 'no; I am not well. I have got to make that confounded speech to-night.' It is well known that his speech at the founding of the Free Library Institution, Manchester, which lasted for but three minutes, when he sat down, was a conspicuous failure. He good-naturedly remarked to a friend afterwards: 'My boy, you have my profoundest sympathy; this day you have accidentally missed hearing one of the finest speeches ever composed for delivery by a great British orator.'

When enjoying an American repast at Boston in 1852, his friends there, determined to surprise him with the size of their oysters, had placed six of the largest bivalves they could find, on his plate. After swallowing number one with some little difficulty, a friend asked him how he felt. 'Profoundly grateful,' he gasped; 'and as if I had swallowed a little baby.' Previous to a farewell dinner given by his American intimates and admirers, he remarked that it was very kind of his friends to give him a dinner, but that such

things always set him trembling. 'Besides,' he remarked to his secretary, 'I have to make a speech, and what am I to say? Here, take a pen in your hand and sit down, and I'll see if I can hammer out something. It's hammering now. I'm afraid it will be stammering by-and-by.' His short speeches, when delivered, were as characteristic and unmistakable as anything he ever wrote. All the distinct features of his written style were present.

It is interesting to remark the sentiments he entertained towards his great rival Charles Dickens. Although the latter was more popular as a novelist than he could ever expect to become, he expressed himself in unmistakable terms regarding him. When the conversation turned that way, he would remark: 'Dickens is making ten thousand a year. He is very angry at me for saying so; but I will say it, for it is true. He doesn't like me. He knows that my books are a protest against his—that if the one set are true, the other must be false. But *Pickwick* is an exception; it is a capital book. It is like a glass of good English ale.' When *Dombey and Son* appeared in the familiar paper cover, number five contained the episode of the death of little Paul. Thackeray appeared much moved on reading it over, and putting number five in his pocket, hastened with it to the editor's room in *Punch* office. Dashing it down on the table in the presence of Mark Lemon, he exclaimed: 'There's no writing against such power as this; one has no chance! Read that chapter describing young Paul's death; it is unsurpassed—it is stupendous!' When *Vanity Fair* was at its best and being published in monthly parts, with a circulation of six thousand a month, Thackeray would remark: 'Ah, they talk to me of popularity, with a sale of little more than one half of ten thousand. Why, look at that lucky fellow Dickens, with heaven knows how many readers, and certainly not less than thirty thousand buyers.'

In a conversation with his secretary previous to his American trip, he intimated his intention of starting a magazine or journal on his return, to be issued in his own name. This scheme eventually took shape, and the result was the now well-known *Cornhill Magazine*. This magazine proved a great success, the sale of the first number being one hundred and ten thousand copies. Under the excitement of this great success, Thackeray left London for Paris. To Mr Fields, the American publisher, who met him by appointment at his hotel in the Rue de la Paix, he remarked: 'London is not big enough to contain me now, and I am obliged to add Paris to my residence. Good gracious!' said he, throwing up his long arms, 'where will this tremendous circulation stop? Who knows but that I shall have to add Vienna and Rome to my whereabouts? If the worst come to the worst, New York also may fall into my clutches, and only the Rocky Mountains may be able to stop my progress.' His spirits continued high during this visit to Paris, his friend adding that some restraint was necessary to keep him from entering the jewellers' shops, and ordering a pocketful of diamonds and 'other trifles; for,' said he, 'how can I spend the princely income which Smith\* allows me for editing *Corn-*

*hill*, unless I begin instantly somewhere!' He complained too that he could not sleep at nights 'for counting up his subscribers.' On reading a contribution by his young daughter to the *Cornhill*, he felt much moved, remarking to a friend: 'When I read it, I blubbered like a child; it is so good, so simple, and so honest; and my little girl wrote it, every word of it.'

Dickens in the tender memorial which he penned for the *Cornhill Magazine*, remarks on his appearance when they dined together. 'No one,' he says, 'can ever have seen him more genial, natural, cordial, fresh, and honestly impulsive than I have seen him at those times. No one can be surer than I of the greatness and goodness of the heart that then disclosed itself.'

Thackeray sometimes made a good point in his replies. He was pestered on one occasion by a young American, who questioned him as to what they thought of this person and that in England. 'Mr Thackeray,' he asked, 'what do they think of Tupper?' 'They don't think of Tupper,' he quietly replied. At the weekly *Punch* dinners, Jerrold and he used to sit together, when the former seemed inclined to wrangle when everything was not to his mind. 'There's no use quarrelling,' said Thackeray; 'for we must meet again next week.'

Beneath his 'modestly grand' manner, his seeming cynicism and bitterness, he bore a very tender and loving heart. In a letter written in 1854, and quoted in James Hannay's sketch, he expresses himself thus. 'I hate Juvenal,' he says. 'I mean I think him a truculent fellow; and I love Horace better than you do, and rate Churchill much lower; and as for Swift, you haven't made me alter my opinion. I admire, or rather admit, his power as much as you do; but I don't admire that kind of power so much as I did fifteen years ago, or twenty shall we say. *Love is a higher intellectual exercise than hatred*; and when you get one or two more of those young ones you write so pleasantly about, you'll come over to the side of the kind ways, I think, rather than the cruel ones.' The pathetic sadness visible in much that he wrote sprung partly from temperament and partly from his own private calamities. Loss of fortune was not the only cause. When a young man in Paris, he married; and after enjoying domestic happiness for several years, his wife caught a fever, from which she never afterwards sufficiently recovered to be able to be with her husband and children. She was henceforth intrusted to the care of a kind family, where every comfort and attention was secured for her. The lines in the ballad of the *Bouillabaisse* are supposed to refer to this early time of domestic felicity:

Ah me! how quick the days are flitting!  
I mind me of a time that's gone,  
When here I'd sit, as now I'm sitting,  
In this same place—but not alone.  
A fair young form was nestled near me,  
A dear, dear face looked fondly up,  
And sweetly spoke and smiled to cheer me—  
There's no one now to share my cup.

In dictating to his amanuensis during the composition of the lectures on the *Four Georges*, he would light a cigar, pace the room for a few minutes, and then resume his work with increased

\* Of Smith, Elder, & Co., the well-known publishers.

cheerfulness, changing his position very frequently, so that he was sometimes sitting, standing, walking, or lying about. His enunciation was always clear and distinct, and his words and thoughts were so well weighed that the progress of writing was but seldom checked. He dictated with calm deliberation, and shewed no risible feeling even when he had made a humorous point. His whole literary career was one of unremitting industry; he wrote slowly, and like 'George Eliot,' gave forth his thoughts in such perfect form, that he rarely required to retouch his work. His handwriting was neat and plain, often very minute; which led to the remark, that if all trades failed, he would earn sixpences by writing the Lord's Prayer and the Creed in the size of one. Unlike many men of less talent, he looked upon calligraphy as one of the fine arts. When at the height of his fame he was satisfied when he wrote six pages a day, generally working during the day, seldom at night. An idea which would only be slightly developed in some of his shorter stories, he treasured up and expanded in some of his larger works. When he received an adverse criticism, he remarked in a letter to a friend regarding it: 'What can the man mean by saying that I am "uncharitable, unkindly, that I sneer at virtue?" and so forth. My own conscience being pretty clear, I can receive the *Bulletin's* displeasure with calmness—remembering how I used to lay about me in my own youthful days, and how I generally took a good tall mark to hit at.' That he felt the gravity of his calling is evident from a reply written in 1848 to friends in Edinburgh, who, presaging his future eminence, had presented him with an inkstand in the shape of a silver statuette of 'Punch.' 'Who is this that sets up to preach to mankind,' he wrote, 'and to laugh at many things which men reverence? I hope I may be able to tell the truth always, and to see it aright, according to the eyes which God Almighty gives me. And if in the exercise of my calling I get friends, and find encouragement and sympathy, I need not tell you how much I feel, and am thankful for this support.'

While Alfred Tennyson the future Laureate received the gold medal at Cambridge given by the Chancellor of the university for the best English poem, the subject being *Timbuctoo*, we find Thackeray satirising the subject in a humorous paper called *The Snob*. Here are a few lines from his clever skit on the prize poem:

There stalks the tiger—there the lion roars,  
Who sometimes eats the luckless blackamoors;  
All that he leaves of them the monster throws  
To jackals, vultures, dogs, cats, kites, and crows;  
His hunger thus the forest monarch gluts,  
And then lies down 'neath trees called cocoa-nuts.

The personal appearance of Thackeray has been frequently described. His nose, through an early accident, was misshapen; it was broad at the bridge, and stubby at the end. He was near-sighted; and his hair at forty was already gray, but massy and abundant; his keen and kindly eyes twinkled sometimes through and sometimes over his spectacles. A friend remarked that what he 'should call the predominant expression of the countenance was courage—a readiness to face the world on its own terms.' Unlike Dickens, he took no regular walking exercise, and being regardless of

the laws of health, suffered in consequence. In reply to one who asked him if he had ever received the best medical advice, his reply was: 'What is the use of advice if you don't follow it? They tell me not to drink, and I do drink. They tell me not to smoke, and I do smoke. They tell me not to eat, and I do eat. In short, I do everything that I am desired *not* to do; and therefore, what am I to expect?' And so one morning he was found lying, like Dr Chalmers, in the sleep of death with his arms beneath his head, after one of his violent attacks of illness; to be mourned by his mother and daughters, who formed his household, and by a wider public beyond, which had learned to love him through his admirable works.

## TOO LATE TO SAVE, BUT NOT TO AVENGE.

A STORY OF THE LAST BASUTO WAR.

It was evening, and for about the space of four hours the earth had been enveloped in almost Egyptian darkness. One by one the stars resumed their silent vigil in the dark canopy overhead, like so many sentinels mounting guard over the weary and travel-stained warriors who slumbered on the plain beneath. All day we had been scouring the country, under a fiery African sun, in quest of small parties of the enemy who might have felt inclined to cross the frontier on some marauding expedition. A small band we were—only about one hundred and fifty strong; and when darkness overtook us, many miles yet lay between us and the camp of our comrades. Inwardly bewailing our hard fate, we turned our horses' heads towards an open part of the country where we could encamp for the night, safe from a surprise from our wily foes. We lighted no tell-tale fires; but each man, with the hard ground for his couch, his saddle for a pillow, and the sky his only covering, tired and supperless, stretched his weary limbs beside his jaded steed, and with the exception of those on guard—who lay in pairs upon their faces a short distance apart from the main body—were soon all fast asleep.

Two days before, we had left the town of Winberg behind, and marching in a south-easterly direction, fully intended to have reached the camp of Ta-Bosego on the night in question, where both troopers and horses might have reasonably expected better than their present fare; but before many hours passed away, we had reason to be thankful for our previously considered misfortune. The darkness had gradually given place to a comparatively clear starlight night, when suddenly the stillness was broken by the sharp clear challenge of a sentinel, accompanied by the ominous clicking of rifle-locks. A reply came back in the Dutch language: 'Do not fire. I am a peace Kaffir, and alone.'

He was allowed to approach; and a glance satisfied us he was really what he represented himself to be; but from some cause or other he was evidently in a state of great excitement. Inquiring

into the cause of his disquietude, his story was soon told. Within an hour or so of sundown, a band of over two thousand Basutos, under the command of Pollos Moperrie, a son of the chief, came up to the kraal where they were located, and under the guise of friendship, induced them to lay aside their arms and prepare some food for himself and his captains. A bullock and several sheep were immediately slaughtered by the unsuspecting peace Kaffirs; and within a short time after their arrival the Basuto leaders sat down to a comfortable repast, generously provided them by the friendly natives. Upon the conclusion of their meal, at a private signal from Moperrie, his savage host fell upon their entertainers, who, before they could obtain possession of their weapons, were murdered in cold blood, old men, women, and helpless infants being stabbed to death by the assegai, or hacked to pieces by their murderous chakas (battle-axes); finishing off by burning the huts and driving off the stock of their victims along with them. The only crime of which these poor people had been guilty was an enormous one in the eyes of Moperrie—namely that of living within the limits of Free State Territory and not rising in arms against its subjects. Our informant, who suspected treachery on the part of the Basutos from the outset, had been engaged at the time of their arrival in driving in some goats from the *veld*, and had contrived to slip into the cover of the friendly bush unobserved, whence he had been an eye-witness of the terrible scene.

During this recital, anathemas could be heard falling freely from the lips of the troopers upon the head of the savage commander, a fiend in human shape. A thrill of horror ran through the men when they learned from the Kaffir that the enemy had resumed their march in a north-easterly direction. The town of Brandfort lay in that quarter, only about three hours' ride from that last scene of slaughter, and no doubt could be entertained that it was their destination. The very thing we were here to prevent; and if darkness had not overtaken us when it did, we must have crossed their track, and gained at least six hours of valuable time; every moment of which, unknown to us, had been of the greatest importance. The town was utterly defenceless; women, children, old men, and invalids constituting at the time its entire inhabitants. All the men capable of bearing arms were then *on commando*, or in other words were volunteers and soldiers serving under the republican flag; and in fact the place contained all that was near and dear to many among ourselves. Fathers and mothers, brothers and sisters, sweethearts and wives rose up before our minds supplicating in vain for mercy at the hands of their savage foes, until blood-thirsty feelings sprang up in our breasts which would have done credit to the instincts of the sable warriors themselves. Ignoring our numerical inferiority as compared with the enemy, we sternly resolved that if too late to save we would at least avenge them.

On went the saddles; and away we sped across country in the direction of Brandfort, straining our eyes to catch the first glare of fire upon the sky,

which might proclaim we were too late to save. But our hopes began to rise as nearer and nearer we drew to the place without sighting that much-dreaded sign. Gray dawn was breaking as we halted our weary steeds upon the Winberg road surmounting the hills overlooking the valley in which stood the town of Brandfort. No sound came from the valley indicating the presence of either friend or foe; all was silent as the grave. Impatiently we awaited the return of the scouts who had been sent forward to reconnoitre, cheerful to a degree; for if the enemy was in the valley below, their escape was effectually barred. Before them lay a comparatively clear and level plain, stretching away towards Bloemfontein; while behind them were the mountains, the summits of which were in possession of their vengeful opponents. The scouts returned to inform us that they had actually entered some of the houses in the outskirts of the town, which in some cases betokened the hasty flight of their inhabitants, and in others the recent presence of the pilfering savage. The sun had by this time arisen which was to look upon a terrible and sanguinary lesson in store for the hoary chieftain of the Basutos, and whose setting rays were destined to view his chosen warriors stretched in death by hundreds upon the plain, and their leader and his favourite son a captive in the hands of his detested white foes.

Remounting our horses, we rode into the town, where we had plentiful indications of the presence of the enemy, in the shape of the household effects of the inhabitants strewn about the place. The residents had saved themselves by flight before the arrival of the enemy in the place, having suspected their presence and intentions through the glare of a recently burned kraal having been perceived by some of the native shepherds from the hill-top above the town. This circumstance had doubtless been the means of withholding the marauders from burning the place, so as to allay the fears of the fugitives, whom they expected—seeing nothing unusual occur during the night—to remain in the immediate neighbourhood of the town; when daybreak would disclose their whereabouts, and they with their cattle would become an easy prey. Too well skilled in the tactics of the Kaffirs however, the good folks of Brandfort had pushed steadily on through the darkness in the direction of Bloemfontein, and before daybreak had placed a good many miles between themselves and their deserted town. At dawn of day the enemy was on their track, little imagining he was hurrying on to his own destruction, and blissfully unconscious that the avenger was already close upon his heels.

Emerging from the south end of the town by the Bloemfontein road, we pushed smartly across the plain, and soon gained the top of a low range of hills a few miles distant, when, as we expected, we got our first sight of the enemy in the open country beyond them; and about two miles ahead of the Kaffirs we perceived at the same time the white-tented wagons of the fugitives. Overjoyed at finding them safe as yet, it was our intention not to charge the Kaffirs, who far outnumbered us, and thus imperil the safety of our friends, but to get between the two parties, and cover their retreat for a few miles; while the enemy could scarcely be so imprudent as to follow much farther in that direction. They awaited our onset in



silence; and making a feint at the left of their line, so as to concentrate their attention upon that one spot, we advanced towards them at a sharp trot, intending to wheel round by their right, and so attain our object. We had scarcely started, when our attention was attracted towards a body of men emerging from the bush skirting the banks of a river beyond the enemy, and who were instantly recognised by us to be the Bloemfontein Volunteers. The Kaffirs at the same time perceived that this sudden change of affairs had at once rendered their situation critical, if not hopeless. Their minds were soon made up; and in the vain hope of cutting their way through and gaining the hills, they advanced in our direction.

On they came, slowly at first, then with a rush, rattling their glittering assegais upon their shields, leaping and yelling as only Kaffirs know how to yell, and stopping within a few yards of us to let fly a shower of these deadly missiles; when we discharged our double-barrelled rifles full in their faces, the effect of which sent many a sable, ostrich-plumed warrior rolling in his tracks; then, with a ringing British cheer—we were mostly English Volunteers—we dashed into their shattered front. Breaking the shaft from the stabbing assegai short by the blade, so as to convert the weapon into a formidable dagger, they fought with the desperation born of despair. With these they thrust viciously at our horses and men, the once bright but now dimmed blade of whose sabres gave a good account of their savage opponents. Soon the steady crash of rifle-fire told the fight was raging fast and furious in another quarter of the field, and 'every man for himself' immediately became the order of the day with the Kaffirs.

They broke in disorder, and flying across the plain in all directions, were overtaken by our vengeful horsemen; while many rushed into an adjoining marsh, afterwards called Fir-Keirde Vley (the Wrong Spot), to escape their vengeance, only to add their numbers to those already slain, by the rifles of the Volunteers. Their rout was complete; and it was only the setting sun that staid the pursuit and put an end to this terrible fray which was mainly instrumental in bringing the war to a termination. Their leader had only saved himself from death by taking refuge in a wagon among some of the women and children, and there besought his intended victims to hide him from the vengeance of the soldiers; for had he attempted to escape from the field when the fight was at its height, he would have been marked out by his dress, and in all probability fallen a victim.

The opportune arrival of the Volunteers was in obedience to an order received from the seat of war to march at once to the defence of the town, information of an intended attack upon the place having been gained by two spies from some of the Basutos themselves. We bivouacked for the night upon the field, as the horses in some cases, owing to the great exertions so recently imposed upon them, actually tottered from fatigue under their riders; while the troopers themselves, from want of food since the previous day, now that the excitement and danger were past, were as far spent as their jaded steeds. There was abundance of stock at hand; and willing hands were soon at work preparing a meal for the rescuers; after which and

a good night's rest, they were ready by the rising of the sun to view the terrible battle-field.

Our loss was trifling; but in many places the ground was thickly strewn with the dying and the dead enemy. In the *vley* where they made their final stand, they lay across each other in some places to a depth of five and six. Some of the slain savages presented a grotesque sight, which under other circumstances might have drawn a laugh from our ranks. Here lay a young man whose only clothing was a lady's crinoline of bright scarlet, which he had donned for the adornment of his stalwart figure, having fastened it round his neck, and stuck his arms through between the bars. A few yards farther off, reclining against the body of a dead horse, sat another dead warrior, his head surmounted by a white dress-hat with a deep crape band round it; and within arm's-length of him lay one of his comrades, whose dress in all likelihood belonged to the original owner of his companion's hat, and consisted of a black dress-coat, a dirty paper collar fastened round his bare neck by a strip of skin passed through the button-holes, and a pair of silver-plated spurs strapped upon his bare heels; while fastened in his hair were a number of fine black ostrich plumes. These and nothing more constituted his rather peculiar costume; while others were masquerading in ladies' bonnets, hats, &c. Laughable as these grotesque uniforms might have appeared to us at another time, the effect was far different then. Their appearance upon the bodies of the now harmless warriors told of the dangers which their former wearers had escaped almost by a hair-breadth.

The enemy who survived that day of reckoning made their way with all haste back to Basuto Land, the bearers of far different news than was anticipated by their chief. Some of them coming across an outlying farm in their flight, made the attempt to secure some memento of their visit in the shape of the cattle which were shut up in a kraal adjoining the house. The peace Kaffirs about the place had each been supplied with a strip of white cloth to be worn round their hats, so as to render them distinguishable at first sight from the enemy. This, by means unknown, must have come to the knowledge of the enemy; for about midnight a Kaffir wearing that distinguishing badge approached the cattle kraal, and commenced to undo the fastenings of the gate; and if he had been successful in his object, the oxen would have walked quietly out one by one, and been driven away in the darkness. The design was frustrated however, and the attempt cost the would-be cattle-lifter his life. Crouching behind the wall on each side of the gate were two peace Kaffirs on guard, minus the white band, which rendered them less noticeable in the darkness, and who were attentively and suspiciously watching the movements of the wearer of that badge of peace on the outside. Stepping inside, he was recognised at once to be a Basuto; and in another instant he lay dead, pierced through the heart by the assegai of one of the peace Kaffirs. The alarm was raised, and a few shots were discharged into the darkness from the windows of the house, which had the effect of driving off the remainder, who although they had the courage left to steal, had none to fight, after the terrible lesson of a few hours before. That was the last we

heard of them upon that occasion. They retired within their own territory, after an unsparing measure of vengeance had been meted out to them for the slaughter of our black allies, whom we came too late to save, but not to avenge.

#### A NIGHT IN LLANTHONY CHURCH.

For the first time in his life the writer has experienced the sensation of spending a night in a church. How he came to do so he proposes to explain. The descriptions of Llanthony Abbey and of its singular site, given by the old chroniclers, as well as those of later authors, had long since excited his curiosity; but it was not till the occasion of which he has now to speak that he was able to put his design of visiting it in practice. Llanthony lies far from the ordinary track of tourists; and from the nearest railway station—that of Llanfihangel, on the line from Hereford to Abergavenny—the only means of transit to be procured was found to consist of a solitary farmer's cart. But this, after some difficulty, the writer and his companion secure. Our way lies up the deep valley of the Hondy, close beside the rushing river, and between the vast, steep, and in some places precipitous masses of the Black Mountains. The valley for some miles is little more than a defile, with little of interest except the rude, bold mountain-wall on each hand.

But presently the scene suddenly changes. As we turn somewhat to the westward, the valley opens before us to quite a respectable breadth. It now reaches, in the words of its oldest describer, to 'a bow-shot's width.' Fine forest trees are interspersed with green pastures; and above them, on a slight elevation north of the river, tower up great gray cliffs of stone which now mark the once famous minster of St John the Baptist of Llanthony. As we near it, we quit the main road, mount a somewhat steep ascent, and are driven into a large grassy court-yard. Everything around us wears an air of neatness, yet there are ruins on all sides. We have entered at the bottom of the court-yard, through a wall whose stones betray that they have once supported a groined roof. To the right, the rude architecture of comparatively modern farm-buildings contrasts strangely with the shapely shafts and sculptured capitals among which they nestle. To the left is a small house with its offices, old and quaint in themselves, yet things of yesterday compared with the massive Norman stone-work on which they are ingrafted. The upper side is bounded by a noble arcade, which once supported the nave of the great church.

We draw up before a low archway in the north-west corner of the quadrangle. Its door stands open, and admits us to a long low room, roofed with the stone barrel-vaulting of the twelfth century. It is cosily furnished in a rustic way, and is lighted at its farther end by a fine Norman window. It once formed part of the abbot's lodging, and is now the half-kitchen, half-bar of the little inn of Llanthony, one of the most curious houses of entertainment at which, in his journey through life, it has ever been the lot of the writer to halt.

As the sun is now fast sinking behind the Hatterills, we are well pleased to learn that some sort of shelter can be given us for the night; and whilst a meal is prepared, we take a quiet stroll among the ruins. The great roofless minster is no bad place for contemplation in the twilight hour. The turf within is short and even; one may pace it without being impeded by fallen stones, or one may sit and meditate on the defaced tomb of some old benefactor or abbot. Solemn the place may be, but it is at the same time beautiful in its decay. The crumbling walls are crowned with ivy, whilst from every chink and cranny hang festoons of tiny blue flowers. Hundreds of martins have hung their nests beneath the arches of the great tower; and they, with their twitterings and restless wings, alone break the quiet of this peaceful spot. We pass an archway in the southern transept, and find ourselves in a trim garden. It is gay with flowers, and fruit-trees are nailed to the old Norman walls. There are vegetables in abundance, and the leek still flourishes on, perhaps, the very spot where St David raised it for his hermit fare, and thus consecrated it to become a national emblem. We make some little circuit to obtain a view of the western front. Before it we find that there is a farm-yard, in which some fine Herefordshire cows are being milked by the farmer's pretty daughter and a maid. The young lady is as daintily dressed as if she were sitting for her portrait in a mock-pastoral by Watteau. But she is in earnest about her work, and only with difficulty is to be drawn into conversation. She in her light dress and hat, the red cows with their white faces, the gray Abbey towers, and the dark mountains as a background, form altogether a picture worthy of the art of a Royal Academician.

But the thin air of the hills makes us hungry. We return to the grassy courtyard, once doubtless the cloister garth. A flight of stone steps leads from it to an outhouse, a kind of storeroom, having a sloping roof. The most attractive of its contents are some sacks of fragrant malt. From this a door opens into our sitting-room, an old, low, but not uncomfortable apartment, with a large window looking into the quadrangle. And now we find that healthy appetites, edged by mountain air, can conquer the toughest mutton.

The meal finished, we again stroll forth. By this time the harvest-moon, full and round and red, is looking down upon us over the eastern ridge of the Hatterills. What fair Melrose may be when visited by the pale moonlight, the writer has never experienced; but he is of opinion that it can scarcely be more beautiful than Llanthony under similar circumstances. Hours pass, and we are still lingering among the ruins. Grand and picturesque as are these walls by day, they are doubly so under those sharp lights and deep shadows which the moon alone can cast. Nor by day is the vast belt of mountain, with its undulating outline, which on all sides incloses us like a colossal cloister, half so overpowering. By this dim light the summits of the hills seem even more closely than ever to shut in from all outer and less hallowed influences the chosen resting-place of the patron saint of Wales. Well might Roger, Bishop of Salisbury, seated at table with Henry I., declare that not all the gold in the

king's treasury would suffice to build so magnificent a cloister as that with which the monks of Llanthony had surrounded themselves!

Leaving the ruins, we descend the track by which we had at first approached them, and follow the main road in its upward course. After a short distance, however, it turns to the right and climbs the bank till it reaches the level of the Abbey. Here it seems suddenly to end at the high gable of a building which is overshadowed by a grove of trees, and has in front of it two ancient yews. We approach, and then find that the road, as if by an afterthought, abruptly turns to the left when it has reached this gable, and proceeds up the valley. But this was indeed its original termination; for this building, now a barn, was the great gateway of the abbey. Its broad archway is walled up, but not hidden from sight, and the ornamented windows above are still open. Standing in the shadow of its trees, with its dark yews before it, this old gateway has a mysterious interest in the moonlight.

Slowly we retrace our steps. All is silent except the ever murmuring Hondy, and the owls which are hooting dreamily to each other from wood to wood. The shattered minster stands gleaming and quiet in the moonlight. The martins are all asleep in their nests under the great tower. It seems hard to leave this scene of solemn beauty, but it is time that we, like the martins, were retiring for the night.

But, as regards the writer at least, this retiring to rest was a far less easy matter than with the martins. 'Here we go up; here we go down; here we go round, around, around,' would seem to be the rule by which to get to bed at Llanthony. To reach my allotted sleeping-place, I walk along a passage and ascend a crooked stair; then I traverse another passage, evidently across a vaulted ceiling, and descend a second stair; presently I find myself in the narrow corkscrew which threads the south-west angle of the south-west tower of the Abbey church, and then I begin to climb in earnest. The turnings of this spiral seem endless; but at last I reach its top, and enter a tiny room—my bed-chamber—in form something like a bee-hive, if a bee-hive could only be square at bottom instead of round. The door is placed in one of its angles. The arrangement of the solitary window-aperture is unique, being nearly triangular in shape, and reaching upwards from the floor some three feet. Through it, however, a bright ray of moonlight enters, and as I cannot look out in a standing posture, I fall on hands and knees and creep into the aperture. It is like creeping through a miniature tunnel, for the wall is several feet in thickness. Under these difficulties I reach the casement and peep out.

I am well repaid. My cell is in the very summit of the south-west tower, and my queer casement is the apex of the tall Gothic window in its eastern front. From this great height I am looking down into the south aisle, and aslant the nave of the ruined church, where the moon is throwing the long shadows of broken arches across the grass which covers the bones of abbots and Norman barons. The extremity of the aisle is beneath my feet; and now it first occurs to me that my lodging is actually within the sacred building, that my bed is above the graves of the dead, and that I am really about to spend the

night in a church. From this altitude the ruins form new and picturesque combinations in the moonlight. Under some circumstances I might be inclined to gaze upon them unwearied; but the fact is that I am less practised in kneeling than were the old ascetics of Llanthony. My position is decidedly uncomfortable, so I creep backwards from my tunnel. My bee-hive looks clean and cosy. The walls are the freshest of whitewash. The furniture of my small bed vies with them in purity. The bed itself does not feel uncomfortable. At least I shall rest more at ease than did the good knight, Sir William of Llanthony, who in the days of Rufus used his iron armour as a night-shirt, till it was eaten away by rust. Musing of him, and of St David, and of the monks, I fall asleep. Not one of the sainted dead who rest beneath rises to trouble my slumbers. No ghostly terrors attend my first night in a church.

Giraldus Cambrensis, writing of Llanthony towards the close of the twelfth century, observes that so great is the height of the surrounding mountains, that the sun rarely appears to rise before the 'first hour of the day.' At the stroke of seven I am again upon my knees in the tunnel at my airy look-out, when the first rays of the sun, as he rises above the Hatterills, fall on my face; and I am well pleased to note so exact a coincidence with the words of the old chronicler. I emerge from my cell and descend a few steps of my corkscrew stair. An opening presents itself to the left, and I explore it. It is merely a passage in the thickness of the wall, and so narrow that I have to move edgewise. It needs no history to tell us that these stairs and passages were built in those early and exacting times when the monks fasted much. Those jolly members of the brotherhood of whom we read in later days as feasting on the fat of Gloucestershire, could never have squeezed through such openings as these. Perhaps that was one reason why the brethren accustomed to the Gloucestershire Llanthony objected so strongly to this, their mother Abbey. I make my way through the western and northern sides of the tower, and see before me the open light of day, broken only by hanging curtains of ivy. These I push aside, and step out upon a projecting crag of masonry. Far beneath me to the left lies the nave; to the right, the southern aisle. I am high above the great arcade, above even the broken windows of the triforium; I am on a level with the long since vanished clerestory, with which this passage formerly communicated. Mine is a commanding position, but it is a giddy one, and I am not long before I leave it.

In the course of the morning we make a fuller examination of the ruins. The two massive towers which flanked the western front of the Abbey church are still entire. Little of the aisles remains; but the six fine pointed arches, with the rounded ones of the triforium above, which formed the northern side of the nave, still stand. The arches on the south are more broken. The western and southern sides only of the great central tower are left. Much of the northern transept is gone; but that to the south, with its fine double Norman window, is almost entire. To the east, the once famous great window is now but a shapeless gap between the two masses of stone-work, which, with their flat Norman buttresses, form the

corners of the building in that direction. Beyond the southern transept, and mostly converted into farm-offices, are considerable remains of the refectory and some other monastic buildings.

In one respect, Llanthony differs from almost every other great ecclesiastical structure of ancient date in the kingdom. In most of our cathedrals and minsters we can trace the several changes in architectural taste which developed themselves between the Norman Conquest and the Reformation. Here, however, everything is of a single period. It was in the twelfth century that this Abbey at once rose to its greatness, and that in a few years it as suddenly began to decline. Hence all its architecture is of that mixture of the Rounded Norman and Earliest Pointed styles known as the Transitional. The cause of the early decline of Llanthony was chiefly the troubled state of the Welsh Marches at the period. It became anything but the abode of peace, and the monks were forced to withdraw. Thus a second and more secure Llanthony sprang up at Gloucester, which from that time forward attracted the brethren and diverted the revenues from the older establishment. The mother-church was stripped of even its bells and ornaments; and Llanthony Prima becoming a mere hospital for the infirm, and place of discipline for the refractory among the brotherhood, dragged on but a lingering existence.

With these reflections we regain Llanfihangel and its railway. And thus will I end the reminiscences connected with my first and only night in a church, with the recommendation to those who are curious in such matters, to go and do likewise.

### THE MONTH.

#### SCIENCE AND ARTS.

THE Council of the Royal Agricultural Society announce in their Report that their meeting for the present year, which will assume the form and proportions of an International Agricultural Exhibition, is to be held at Kilburn from June 30 to July 7th. The site chosen includes one hundred acres, easily accessible by railway, and not more than two and a half miles from the Marble Arch. Handsome prizes will be offered for sewage-farms and market-gardens, and 'in addition to the exhibition of British and Foreign Implements, Live-stock and Produce, it is proposed to enhance the interest and the instructiveness of the meeting by shewing some of the processes of foreign dairying in actual progress in the inclosure, as well as traction-engines and automatic implements in action.' There will also be an exhibition of ancient and modern farm-implements side by side, which will exemplify the great advance made in agricultural machinery since the Society was formed forty years ago.

Considering that London requires one hundred and twenty thousand gallons of milk every day, it is to be hoped that the promised foreign dairying will excite such a spirit of emulation as shall make dairy-farms more productive and profitable than ever. There will be prizes for the best butter, cheese, bacon, hops, cider; for bees, hives, and honey; and a separate prize for the competitor who shall in the neatest, quickest, and most com-

plete manner drive out the bees from a straw skep, capture and exhibit the queen, and transfer both combs and bees into a hive on the movable-comb principle. And fifty pounds and a gold medal are offered for the best wagon for conveying perishable goods, meat, poultry, fish, and the like, by railway, at a low temperature, a journey of five hundred miles. It is required that the temperature of the interior shall not exceed forty-five degrees Fahr. The Society's prizes are open to all the world, and any one may write to the secretary for particulars.

In a paper read to the Quekett Microscopical Club, Mr J. Hunter states that a fertile queen-bee will in four years lay a million eggs. Twenty-one days are required for the production of a worker-bee; 'but the same egg that produced the worker in twenty-one days could, had the bees been so minded, have been bred up to a queen in sixteen days. The bees,' continues Mr Hunter, 'only rear queens when necessity calls for them, either from loss of their old monarch or apprehended swarming. If I remove the queen from a hive, the first of these contingencies occurs, and after a few hours' commotion, the bees select certain of the worker-eggs, or even young larvae two or three days old. The cell is enlarged to five or six times its ordinary capacity; a superabundance of totally different food is supplied; and the result is that, in five days less than would have been required for a worker, a queen is hatched. The marvel is inexplicable. How a mere change and greater abundance of food and a more roomy lodging, should so transform the internal and external organs of any living creature! The case is without a parallel in all the animal creation. It is not a mere superficial change that has been effected; but one that penetrates far below form and structure, to the very fountain of life itself. It is a transformation alike of function, of structure, and of instinct.'

An important line of demarcation between the vegetable and animal world has been removed by recent investigation. Plants assimilate carbonic acid, give off oxygen, and form starch. By experiments on a species of Planaria, a flat worm, described as *Convoluta Schultzei*, Mr P. Geddes has demonstrated that that animal disengages oxygen in large quantity, decomposes carbonic acid, and produces starch. This worm abounds in the shallow water on the margin of the sea, and on exposure to sunlight pours forth a stream of bubbles containing, as proved by analysis, from forty-five to fifty-five per cent. of oxygen. And, on subjecting a number of Planaria to chemical treatment, a quantity of ordinary vegetable starch was obtained. Pointing out the significance of these facts in the *Proceedings* of the Royal Society, Mr Geddes says: 'As the *Drosera* and *Dionæa* [two species of well-known vegetable Fly-traps], which have attracted so much attention of late years, have received the striking name of Carnivorous Plants, these Planarians may not unfairly be called Vegetating Animals, for the one case is the precise reciprocal of the other. Not only does the *Dionæa* imitate the carnivorous animal, and the *Convoluta* the ordinary green plant, but each tends to lose its own normal character.'

Professor Hughes, whose microphone established his reputation as a scientific experimentalist and discoverer, has brought out an Induction Balance; that is an instrument in which the



weighing or testing is done by induction currents. There are a few cells of a Daniell's battery; primary and secondary coils, from which currents run in opposite directions; and connections with a telephone, or with an electric sonometer. So long as the currents are undisturbed they balance or neutralise one another; but the slightest disturbance or alteration produces a sound in the telephone or sonometer, as the case may be. For instance, a sovereign is placed in the interior of one of the coils; a disturbance is at once indicated. Place another sovereign in the opposite coil, it restores the balance, and the disturbance ceases, provided the second coin be exactly of the same size and weight as the first. But should any difference exist, however slight, it is immediately indicated by a sound; and if shewn on a scale, offers a ready means of detecting 'sweated' or debased coins, with an accuracy never before attained. And the same with all other metals; consequently, metallurgists and chemists will be able to ascertain the exact molecular constitution of a metal, the amount of alloy, and the degree of chemical purity or impurity. That this instrument will render important, and as yet unforeseen, services to science may safely be predicted; for besides what is already stated, it will detect the changes, produced in the substances under examination by magnetism, strain, pressure, or heat. An instrument that can do so much will, we may assume, do more, when the best form shall have been discovered and tested by a variety of practical applications. Professor Hughes' first microphone was a rough and ready putting together of odds and ends, and his new Induction Balance is a similar exemplification of his skill and genius.

The sonometer or audiometer, as some practitioners will call it, promises to be useful to the medical profession, as well as to the physicist. It measures all gradations of sound, and may be employed to test ears as well as electric currents. In an examination for acuteness of hearing, it would prove infallible, would discover the slightest difference in sensitiveness to sound between the two ears, and detect the changes produced by ill-health. Just as we are going to press, we learn that by employing the sonometer the beating of the pulse can be heard.

Among recent inventions, the Writing Telegraph is remarkable for the combination of philosophical principles and ingenious mechanical devices by which its inventor, Mr E. A. Cowper, can excite a pen thirty miles distant, or more, from his hand to write in distinct and legible characters the message which he wishes to communicate. The sending instrument, at the hither end of the line wire, is provided with a coiled band of paper, which uncoils (by mechanism) as the operator writes his message with a vertical pencil. To this pencil are jointed 'contact rods,' which, as their name indicates, play an important part in the reproduction of the message at the farther end, where a glass pen moving up or down, backward or forward, in exact obedience to the hand of the distant sender, records it in ink, also on a revolving band of paper. So sensitive is the mechanism, that differences of handwriting are immediately shewn as different persons manipulate the pencil. In consequence of the continual uncoiling of the paper, new beginners find it difficult to avoid

leaving gaps in their *as*, *os*, and *ms*; but this is soon overcome by practice, and the words as they pass from under the mysteriously moving pen appear clear, bold, and unbroken. The result is so complete, that the instrument is, so to speak, invested with a charm which inspires an onlooker with surprise and admiration. The importance of this invention must be our excuse for thus again referring to it in these columns.

Can teeth be transplanted? If recent accounts of operations by dentists are trustworthy, the answer must be in the affirmative. But the question has been formally discussed at a meeting of the Odontological Society, and from this we learn that it was in *replanting* (which is not the same thing as *transplanting*) that the foreign dentists, whose names had been cited, achieved their success. Among them, a Frenchman, Dr Magitot, has published full particulars of cases in which diseased teeth were taken out, and the root or a portion of periosteum was cut away, and then were replanted in the same socket, where, after a few days or weeks, they became firm and serviceable. Out of sixty-three operations in four years, five were failures; but some of the cures were painful and tedious, owing to local discharge. In technical phraseology, Dr Magitot holds 'the indications for an operation to be the existence of chronic periostitis of the apex of the root, its denudation, and absorption of its surface. . . The resection of this, which plays the part of irritant, is the essential aim of the operation. And the extraction having been performed with due care, if no other lesion be detected save the alteration in the apex of the root, the tooth is to be replaced as soon as this has been excised and smoothed, and the hæmorrhage has ceased.'

From this it will be understood that the pulling of teeth from one human jaw in order to plant them in another is very far from being an accomplished fact. And it is fair to mention that some English dentists practised the replanting of teeth ten years ago; and there is an instance on record of a replanting successfully performed in 1853. For further information, the *Transactions* of the Odontological Society, the *Review of Dental Surgery*, and the *Bulletins et Mémoires de la Société de Chirurgie* may be referred to.

After many years of trials and experiments to convert iron into steel by a short and simple process, the endeavour has been crowned by success. In Cleveland, that north-eastern corner of Yorkshire, where iron ore is as abundant as salt in the sea, excitement prevails, and years of prosperity are anticipated; and it may fairly be assumed that all ironstone districts will be stimulated into activity by this last metallurgical discovery. As is pretty well known, the long-standing difficulty had been to get rid of the phosphorus present in the iron, and many were the ingenious devices put in practice to overcome it. At length Mr Sidney G. Thomas, F.C.S., commenced a series of experiments on the effect of different materials as a lining for the 'converter'—the receptacle in which the molten metal is subjected to the blast. Experience had demonstrated that the usual siliceous lining favoured retention of the phosphorus; but what other could be devised that would resist the intense heat? By perseverance the alternative—a mixture of limestone and silicate of soda—was discovered. This expelled the phosphorus. The

preliminary results, necessarily on a small scale, were confirmed by large experiments made at the Blaenavon Iron Works, in Wales; and now the process has been adopted by one of the leading firms in the Cleveland district, by whom it will be fully developed, and the conversion of 'pig' into good steel, free from phosphorus, will become an everyday operation. Shall we see as a consequence modification and quickening in the manufacture of machinery and ships; and will cheap steel have any effect on the trade of Sheffield and Birmingham?

National water-supply is a great question; and when the Crown Prince recommends it to the consideration of the Prime Minister with a view to a Royal Commission thereupon, we may assume that it will be attended to. Civilisation as developed in our day is not favourable to purity of water; and if some remedy be not applied, the deterioration of rivers will be accelerated with consequences that may be imagined. Of course when the inquiry is once started it will have to comprehend all available sources of water-supply, including those that lie deep underground, as well as those on the surface. Statements concerning the deep-lying reservoirs have already been given in this *Journal*: estimates of the quantity of water they contain, and systematic explorations for additional supplies will have to be made. Judging from past experience important discoveries may be expected to follow. Leamington may be taken as an example. The town is situated on an easterly extension of the saliferous deposits of Shropshire and Worcestershire, and derives thence the saline springs to which it owes its reputation. Until about six years ago the water-supply was drawn from the river Leam. The corporation then sought to substitute spring-water, and bored to a depth of three hundred and forty-six feet, but found so much salt water that the undertaking was abandoned. They consulted Professor Ramsay, Director-general of the Geological Survey, and on his advice began another boring at the foot of a hill a mile distant; and after penetrating mostly through sandstone to a depth of two hundred and two feet, they struck an enormous supply of fresh water (pure spring-water), which now yields two million gallons a day. From this it may be inferred that by a sufficient number of borings in the right places any quantity of water may be obtained. Rugby is an instance of a wrong place, for a boring there more than a thousand feet deep produced brine only. Coventry on the other hand gets a million gallons a day of clear spring-water from four bore-holes, the deepest of which is four hundred and fifteen feet.

Some time ago, Dr Stevenson Macadam pointed out in a communication to the Royal Scottish Society of Arts that the dirty condition of water cisterns in dwelling-houses was highly prejudicial to health, and he gave analyses of the sediments, which consisted of putrescent matters impregnated with lead. The water at the supply-pipe may be pure, but soon becomes impure if not properly cared for in the cistern. 'The remedy for the evil,' says the Doctor, 'lies in the periodic cleansing of the house cistern, which should be regularly done every month or two with a very soft brush, and every care must be taken that the natural skin of the lead be not disturbed. A wire or perforated zinc cover might be placed over the cistern, to keep

out mice, fragments of plaster, and so forth; but a tight cover, which hinders the aeration of the water, should not be used.'

From the official returns of minerals and metals for the year 1877, we learn that the quantity of coal dug out in the twelvemonth was 134,610,763 tons; of iron, 6,608,664 tons; of lead, 61,403 tons; of tin, 9500 tons; of copper, 4486 tons; of silver, extracted from lead, 501,435 ounces; and of gold, nearly all obtained from Merionethshire, one hundred and forty-three ounces. More than fifteen million tons of the coal were consumed in producing the more than six million tons of iron from the ore. The total value of these metals and minerals was £58,398,071. Future years will see a falling off, for the Cornish mines are now so deep that the cost of working is enhanced; and every year greater quantities of copper and tin are brought to this country from Australia and the Straits Settlements.

As is known to many readers, large masses of iron have been discovered by explorers in different parts of Greenland, and discussions as to their origin have ensued. Were they meteoric or not? The answer arrived at by recent researches is *not*. In the words of the Report above quoted, it is 'now shewn conclusively that the iron masses are all geological productions of the immense lava-field which covers to an enormous (and northwards to an unknown) extent the greater part of Northern Greenland.'

It has often been stated that the railway 'cars' built in the United States are much stronger than the railway 'carriages' of this country. An example occurred in Philadelphia during a tremendous gale, with wind rushing seventy-five miles an hour, in October last. A shed under which trains were drawn up ready for service was blown down. The cast-iron columns, ten inches diameter and twenty-five feet long, supporting the iron girders of the roof, fell upon the cars; but the cars were bruised only, not broken. In one instance a column struck a car near the middle, and snapped off; but the framework of the car was not fractured. Most readers will agree with what has been remarked on this fact, that a car that will stand without injury the impact of a ten-inch cast-iron column, with six tons of extra weight, driven by a gale of seventy-five miles an hour, contains an excess of strength very assuring to the traveller.

#### WANTED, A HAT.

MODERN scientists are fully agreed that the Human Hat is not congenital, and many instances are on record of races totally devoid of any form of it. As a general rule, it may be laid down that a hat of any kind is unknown among barbarous tribes; while it is an indispensable adjunct of civilisation. But there are exceptions to this rule. Captain Cameron has told us that some of the natives of Central Africa cultivate a hirsute head-covering which is either typical or imitative; we have been told that in the Southern Seas some of the aborigines use a head-covering which serves alternatively as the family soup-tureen; and we of our own knowledge are aware that in this country

there are many educational institutions where youth is free to go unencumbered with artificial head-gear. In stating the rule we readily admit these exceptions, and proceed. The hat makes its appearance at a very early stage of existence. In a few weeks after birth, the first incipient growth appears in a soft concave form, enveloping three sides of the head. This develops in the course of years, and according to circumstances, into a somewhat harder and broader form covering only the top; then it extends a margin and stiffens; while ultimately it elongates and assumes a cylindrical form. It is a remarkable fact that in the earlier stages of its history, this latter form, which one may call the full maturity of the Human Hat, did not develop until about the age of twenty-one years; whereas now it makes its appearance occasionally at about the fourteenth or fifteenth year, although more generally at about the seventeenth or eighteenth. In many cases it is simultaneous with admission into church-membership.

That there is a sex in Hats is of course well understood; but here we treat only of the male gear. The female hat is too complex and various to be treated of within the limits of this article, and it is indeed questionable whether any member of the male sex is competent to treat of it at all. It is after passing the second and third stages that the hat begins to work its influence upon man. Then it becomes an inseparable necessity. To remove it forcibly calls up all the worst passions of his nature; while its voluntary removal argues the possession of a certain refinement of soul exhibiting itself in deference to age or beauty, tribute to worth, and in veneration for institutions. And the non-removal voluntarily indicates conversely the rude boorish animal which has assumed the outward signs without the inward grace of civilisation. Again however, we must note an exception. Among the many species of mankind, there is one which is never known voluntarily to remove its head-covering, and yet is devoid neither of grace nor of refinement. It is popularly supposed that Quakers sleep in their hats, but to this calumny we are enabled to give an authoritative denial.

A full-grown man without a hat of some sort is a *lusus nature*. His appearance in conventional garb in a public thoroughfare without this excrescence will produce almost as much sensation as a runaway horse. How inseparable the thing is from our daily thoughts and actions is evident from the multitude of common colloquial expressions referring to it. One phrase—'As mad as a hatter,' has often puzzled inquiring minds; but it is probable that its explanation may be found in the scientific theory with which we set out. If madness is traceable to the malformation of brain-cases, then it is directly traceable to the work of hat-makers.

There is this curious anomaly about the Human Hat, that while it is inseparable from man, who seizes it as one of his most precious inheritances, pressing it closely on to his head when abroad, and clinging tenaciously to it whether in the company of friends or enemies, yet its shape and colour and quality may be changed at pleasure. There are some men whose vanity enables them always to cultivate successive crops of new

glossy bright hats, and others whose vanity enables them always to maintain a supply of very bad old ones. There are some men who are always cultivating new hats, and some who never change their first growth. Some men, again, have the faculty of assimilating the hats of others very readily, and it is noticeable that these persons usually display a fine discrimination. In the abstract, one hat may be as good as another; but in the concrete, a good hat is certainly better than a bad hat. To enter a house or public place with an old hat and to leave it with a good new one, without pecuniary expenditure and without physical exertion, argues the possession of mental grasp and adaptive capacity very admirable from a certain point of view. The inheritors of the old hats may probably be disposed to characterise these traits differently; but their opinions are biased. The Human Hat is a capital index of character, as well as an infallibly professional indicator. Who, for instance, can mistake the Clerical Hat, the Sporting Hat, the Travelling Hat, or the Miller's Hat? So also in the often close assimilation of the female to the male head-gear in shape and material, we have striking evidence of that tendency whose aim is to equalise the sexes. It is idle to speak of the supremacy of man when he is fast losing even the distinction of his own head-gear!

But dearly as a man prizes, and carefully as he cherishes and fondles this precious inheritance, it is fruitful of much mental anguish and much physical discomfort to him. As evidence of the former, we need only remind our fellow-sufferers that the careful thought and diligent research of centuries have not yet determined what is the best method of disposing of a hat in church or in other place of public meeting where space is limited and female skirts abound. Nor has any amelioration been yet afforded to city possessors of the stove-pipe variety in the hot brain-oppressing days of summer, and in the wet gusty days of autumn and winter, when Boreas runs riot along the streets and down the cross-lanes. How many pious thoughts are checked, how many benevolent intentions are frustrated, how much evil language is engendered by these defects in this otherwise admirable human organ, it is beyond our power to calculate. Most people can associate some sin of omission or commission with a hat, and charge it as the very 'head and front of their offending.' It is truly lamentable that such a state of things should continue in these days of scientific research. That we have not yet passed the acme of mechanical invention, the telephone and the phonograph have assured us. There is still possible originality in the walks of science and in the appliances of daily life. What Stephenson or Wheatstone, or Hughes or Edison will now arise to supply a universally felt (or silk) want? That want is a Patent, Universal, Adaptable Hat—suitable for all climates, positions, and circumstances—which will enable man to dispense with umbrellas and physical discomfort, with hat-cases and mental torment—which will be brain-stimulating and not head-crushing—and which will be in all respects a thing of beauty and a joy for ever. For the inventor of a truly perfect Human Hat, there is an enormous fortune in store. The late king of Burmah we were told had devoted himself to cultivating a paper variety; but to this we can

see, in our climate at anyrate, many objections. In Hat-philosophy there is still room for a Teufelsdröck.

#### ABOUT LOCUSTS.

FROM a resident in Smyrna we have received the following interesting communication regarding these Eastern pests, the locusts. He thus writes: 'In the month of May 1878 I went by rail to a village situated about five miles from the town of Smyrna. On one part of the line there is an incline, which I noticed we were ascending at an unusually low rate of speed, and the engine was puffing and labouring in a most unaccountable manner. On looking out of the window to ascertain the cause, I perceived that the ground was literally covered with locusts; and scarcely a minute had elapsed ere the train ceased to move, owing to the rails having become wet and slippery from the number of these insects that had been crushed on the line. Sand was thrown on the rails, and brooms were placed in front of the locomotive, by which means the train was again set in motion; and we finally reached our destination in thirty-five instead of fifteen minutes, the usual length of the journey. On entering the village, I called at a friend's house, and found the inmates assembled in the garden, drawn up in battle-array, armed with brooms, branches of trees, and other implements of destruction, waging war against their unwelcome visitors the locusts, which, it appears, had scaled the outer walls of the premises, taking the place by assault, and were committing sad havoc on every green thing to be found in the garden. The united efforts of the household, however, were powerless against their enemies, which were momentarily increasing in number; so they were compelled to beat an ignominious retreat, and seek refuge in the house.'

'I now propose to give some account of the nature and habits of these insects, which may possibly not be uninteresting to European readers. Locusts are first seen towards the end of April on the slopes of the hills, where the eggs of the females had been deposited the previous autumn. When born they are about the size of ants, but develop in a wonderfully short time to their full size. Early in May they are sufficiently strong to travel all day on foot, collecting together at night in dense masses. At sunrise they recommence their march—their heads invariably turned to the south—devouring every green herb that comes in their way, grass especially being their favourite food. In the rear of these advancing armies others are following, which subsist on what is left by their more fortunate companions of the advanced guard. Towards the end of May locusts are sufficiently developed to take short flights on the wing, and wherever they alight woe betide the unfortunate owners of the property! In June and July they rise to a considerable height in the air, their infinite numbers occasionally darkening the sun. As at this season of the year there is no more grass in the plains and the corn has been harvested, the vineyards are unmercifully attacked as well as the leaves of trees; and when hard pressed for food, even the bark of trees is not spared by these voracious insects. Locusts die off in August; but before this occurs the females bore holes in the ground on the slopes of the hills, sufficiently large

to insert their bodies; then the males—I am assured by eye-witnesses—cut off their wives' heads; and thus the eggs which are contained in the females' bodies—averaging about seventy in number—are preserved against the inclemencies of the winter season.

'It occasionally happens that locusts disappear for a number of years in succession; it is therefore presumed that in seasons of scarcity they are compelled—before the breeding season—to take long flights in search of food; and when this occurs, millions of their dead are found on the shores of the sea, and the effluvia from their bodies often occasion great sickness. In the year 1832 locusts lay two feet deep in the Bay of Smyrna. Shipping and typhus and other fevers became so prevalent in the town that many families in a position to leave, took refuge in the country villages. With a proper government, this Eastern plague could by degrees be done away with; but the Turks leave everything to Fate; and although occasional orders are given by the governors in the interior for their destruction when they first appear in the spring, only half-measures are taken, and little is gained by these futile attempts to destroy them. In former times, Cyprus was annually devastated by locusts; but of late years this great infliction has almost ceased to be a source of anxiety to its agricultural population, owing to the intelligence of a European who holds property on the island, and who invented the following simple method of destroying them in their infancy, which has been already alluded to in the public journals.

'Locusts, as mentioned before, are born on the slopes of the hills, and when they are sufficiently developed to commence their work of destruction, descend into the plains in long and regular columns, never deviating from their path. Anticipating this method of progression, trenches are dug at the base of these hills; and when the locusts are within a few yards of the pits, they are inclosed between two long strips of canvas placed perpendicularly in parallel lines leading to the mouths of the pits. A piece of oil-cloth is then spread on the ground, extending a few inches over these trenches in a slanting position, over which the locusts continue to advance, and are precipitated into these traps in innumerable quantities, and immediately destroyed. If the Turkish government followed the example set them by the inhabitants of Cyprus, Asia Minor would soon be free of locusts; but as there is little chance of this being the case, we must expect a yearly increase of these insects, and trust to natural causes for their destruction.'

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